

Article

Presence of Social Client Relationship Management within the Nigerian Construction Industry

Rapheal Ojelabi ^{1,*}, Opeyemi Oyeyipo ², Adedeji Afolabi ¹ and Lekan Amusan ¹

¹ Department of Building, Covenant University, 112233 Ota, Nigeria;

adedeji.afolabi@covenantuniversity.edu.ng (A.A.); lekan.amusan@covenantuniversity.edu.ng (L.A.)

² Department of Quantity Surveying, Bells University of Technology, 112233 Ota, Nigeria; oyeyipoo@gmail.com

* Correspondence: rapheal.ojelabi@covenantuniversity.edu.ng; Tel.: +234-706-040-07871

Received: 28 January 2018; Accepted: 12 April 2018; Published: 17 April 2018



Abstract: Client relationship management (CRM) has become a subject matter of interest to both academics and business practitioners. This is because it reflects the need to manage successful and profitable client relationships for organizations. Construction organizations, as well as the construction industry, are vital components of economic development in Nigeria, but many organizations struggle to perform the client relationships expected of them. The use of social media in the present era has given power to the relevant stakeholders to express their perceptions to a very large audience on the social media platforms of construction organizations. The application of social media to marketing is essential to managing client relationships. This research has been carried out to examine the level of awareness and use of social client relationship management (CRM 2.0) in Nigerian contracting and consulting construction organizations. In other words, the purpose of the study is to examine the level of adoption of social media platforms in client relationship management in the construction industry in Nigeria. The study also assessed the barriers to the adoption of the use of social media platforms in client relationship management. Using a questionnaire survey, a purposive quota sampling technique was utilized for the collection of data from contracting and consulting firms. The findings reveal that contracting and consulting firms have little to no awareness of CRM 2.0. This study suggests that Nigerian construction organizations are still hesitant to implement social media in a business environment and fully adopt CRM 2.0 in the construction industry.

Keywords: client; social client relationship management; construction organizations; social media

1. Introduction

The relevance of the client in any industry or business, be it manufacturing, telecommunications, or construction, cannot be denied [1]. The sustainability of any form of business is dependent upon its clients because their significance is second to none. Therefore, it is necessary for business organizations to maintain healthy relationships with their clients. Preece and Shafiei [2] opine that a customer's relationship with an organization should begin from the point of contact with the organization to the point that they become integral part of the organization. Customer service should not be limited to after-service engagement and complaint management alone, but rather, there should be an establishment of a lifecycle organization-client relationships so as to give the organization a firm perspective of the clients [3]. It is evidenced from the foregoing that the need to prioritize client care is of utmost importance.

Bompolis and Boutsouki [4] note that the concept of client relationship management (CRM) emerged in the 1990s in an effort to advance organization-client relationships and to address the existing gaps in that area. Since its inception, the CRM concept has not only gained prominence in

the business world, but it has attracted the attention of academia as a new area of research interest [5]. In a similar context, the authors of [4] view CRM as an approach that emerged due to the need to create a business environment that allows for effective client management. Parvatiyar et al. [5] also regard CRM as a comprehensive strategy for and process of acquiring, retaining, and partnering with selected clients to achieve a mutual benefit between an organization and its clients. Without a doubt, this approach has contributed to the growth experienced in the business world.

Social media platforms have become pervasive in many commercial circles and have become a global phenomenon in the past few decades. Pererra et al. [6] reckon that social media platforms involve communication technology that ensures that a community of individuals build relationships. Kaplan et al. [7] state that social media platforms include but cannot be limited to collaborative projects (such as Wikipedia), YouTube, blogs, virtual game worlds, social networking sites, and virtual social worlds. Social media platforms such as Twitter, Facebook, and LinkedIn are few of the social networking sites used for professional networking reasons. The advent of technology in the present era has granted clients the privilege to express their opinions without barriers to a very large audience on social media platforms about their experience with an organization's service or products [8].

The bad reputation of the construction industry, caused by traditional procedures and practices, has failed clients of the industry [1]. The industry has been known for time and cost overrun, reworking, poor workmanship, poor safety performance, non-existent after-care, and negative environmental impact. PIDAS, a customer care company [3], asserts that clients in the social media generation no longer want to be passive as they now have platforms through which they can actively engage organizations about their experiences or the professional services rendered. The bad experiences of some clients in developing countries such as Nigeria have led to attacks on the social media platforms of indigenous construction organizations and professionals regarding the frequent occurrences of corruption, incompetency, poor quality of workmanship, cost overrun, unfair charges, the use of substandard construction materials, and theft, among other problems. The social media attack on indigenous construction organizations might have affected their engagement by prospective clients in the construction industry. These problems experienced by clients are often not made known to the management of construction organizations through any official channels. Hence, such issues and future fears are not formally voiced and sorted out. It is therefore expedient for Nigerian construction organizations and professionals to consistently engage their clients and prospective clients on social media platforms on construction-related issues as these platforms have been adjudged by [9] to create a two-way interaction medium. This has led to the need for strategic concepts of social client relationship management that bring about change in the operation of construction organizations.

Social client relationship management (CRM 2.0 or social CRM) is a concept that taps into the availability of the social media platforms during a client's engagement in a bid to earn their trust. This new order of client management enables clients to be part of organizations, granting clients an active role within the service process to allow organizations to act with better effectiveness and efficiency for the clients' benefit [3]. Preece et al. [1] assert that clients' integration in the construction production process has made them more active by making known their demands and thereby enhancing the construction industry stakeholders' efficiency and effectiveness in the management of construction projects. Faase et al. [10] add that both private and public clients' integration in the construction production process is necessary to protect their investments and to ensure value for money and accountability from organizations in the construction industry. The availability of social media platforms has made clients active in the construction process and management by granting them the privilege to share their perspectives with a large audience. Mathouse et al. [8] state that when a client generates content about issues among construction organizations, he or she is simply engaging with the construction industry. The reality of clients' social media power is visible when they make known to the public the sharp practices of construction companies in the procurement of construction projects. Thus, clients can be referred to as the watchdogs of the construction industry's activities in the public space as a result of their active engagement in construction-related activities through social media

platforms. The construction organizations' quests to meet the demands of clients will no doubt enhance their effectiveness in the construction industry. Therefore, it is necessary for construction organizations to allow for better interaction with clients by using social media platforms more affirmatively. The need to use social media platforms to engage with clients' need is considered to be a good approach because most existing or prospective clients have a link to social media platforms. The social client relationship management idea will not only make organizations more effective and efficient, it will also make them more innovative as the satisfaction of clients will be the major driving force. This concept has been seen as a ray of light in the telecommunication and manufacturing industries, among others, and it has contributed significantly to business growth globally [1,11]. However, the social CRM concept is yet to be integrated into the construction industry. There are limited studies on social client relationship management [12,13], especially on the relationship marketing of clients in the construction industry as compared to customer management in the business world.

Harrigan et al [14] argue that while relationship marketing in organizations refers to relationships with clients, suppliers, employees, the government, and other stakeholders, CRM focuses on client relationships alone. CRM ensures improved performance for large organizations in initiating and maintaining cordial relationships with clients [15]. Similarly, Warfield [16] highlights the benefit of social CRM in the area of establishing market trends, rather than collating and responding to feedback from the client. Even with the many benefits of CRM in different sectors, the major drawback of CRM technology is that it allows organizations to use many channels to relate to clients [17]. While the inclusion of more than one channel of communication offers more chances to communicate with clients and potential clients, it presents the challenge of managing client communications on many channels. Multi-channel communication sometimes makes it difficult for organizations to allocate resources for efficient client relationship on all the channels.

There have been several studies on the use of social media platforms and related apps in the construction industry worldwide. Liu et al. [18] carried out research to examine the perceived benefits of apps by construction professionals in New Zealand. Similarly, a study to assess the use of social customer relationship management by building contractors was embarked upon in Tasmania in [19]. Although, studies have been carried out to evaluate CRM in business-to-business markets, Kaplan et al. [7] reckon that the concept is still in the infancy stage in the construction industry. A few CRM implementation studies have been carried out outside of the construction industry. Harrigan et al. [14] present empirical research evidence to examine the impact of social media platforms on the CRM activities of small and medium business enterprises in Ireland. Aheame et al. [20] posit the challenges of CRM implementation in business-to-business markets. Preece et al. [1] identify some challenges that can limit the use of social CRM among construction organizations in the industry, including lack of senior management support for the tool due to their limited understanding of CRM 2.0 capacity, construction organization staff deficiency in skill required for the management of CRM 2.0 for organization-client relationships, and poor usability of the tool. Little research specific to Nigeria regarding the challenges of adopting CRM 2.0 have been carried out. However, the low use of CRM in the construction industry could be linked to the challenges experienced in the implementation of the tool in the sector. It is therefore pertinent to carry out a study within the construction industry that seeks to assess the presence of social client relationship management. The purpose of the study is to examine the level of adoption of social media platforms in client relationship management in the Nigerian construction industry. The study also assessed the barriers to the adoption of the use of social media platforms in the client relationship.

The study will highlight the level of awareness and the adoption of CRM in the Nigerian construction industry. This is essential in order to address the need for the adoption of CRM 2.0 in client relationship management in the built environment. The research will identify the significant barriers to construction organizations' adoption of CRM 2.0, which will help existing construction organizations and prospective organizations in the industry. The study presents a platform upon which future studies can be built in an effort to ensure the strategy is adopted in the built environment.

However, just as customers are considered to be highly significant to business and other service industries, the client is no less significant in the construction industry. The impacts of the client are even more significant here as they are mostly responsible for the initiation of the construction business in the built environment. Therefore, it is necessary to also integrate the concept of social client relationship management in the built environment. The integration of social media platforms will also provide the construction firms, as in other industries, the opportunity to approach their client rather than the other way around, not only to interact with them but to listen and talk to them toward achieving a mutual end [4].

2. Review of Literature

It is well-known that the world is now a global village due to the discovery of internet [21]. The introduction of the internet into the global space has contributed immensely to the increase in human interaction across the planet. Since its inception, there has been an exponential increase in numbers of internet users globally [22]. The significance of the internet cannot be denied in all fields of human endeavor, spanning across medicine, academics, and telecommunications, among others [23]. However, despite the positive impact of the internet, since its launch, there has been a continuous effort towards making the internet more versatile and essential for day-to-day activities. This has led to the initiation of different social media platforms, which include Facebook, LinkedIn, Twitter, and Google+, among others. Kumar et al. [24] referred to social media as the undisputed king of internet due to its significance in the global community. According to Adegbuyi et al [25], it is essential that small- and medium-sized businesses understand the use of social media platforms, such as Facebook and Twitter, and the strategies behind using social media for growing their businesses. Unfortunately, this is not the case, as many small businesses do not have a strategy when they begin using social media. Begorgis [26] affirms that social media has changed undeniably the way individuals communicate, share information, and create content. The strength of social media has made it highly instrumental in the business world. Social media is seen as a tool that can enhance the performance of business across the globe, which has led to business organizations adapting social media into their business plans.

The necessity for business organizations to integrate social media into their business affairs is aimed at establishing a strong collaboration with their clients. Moules' report in the *Financial Times* [27] revealed that 6 out of 10 business owners are investing, or planning to invest, in social media so as to strengthen their relationship with their clients and enhance their brand. However, prior to the introduction of social media into business affairs across the globe, client care was managed with the concept of client relationship management (CRM). The existing client relationship management structure in organizations succeeded in establishing relationships between organizations and their various clients through software packages, such as Peoplesoft, Telemation, Oracle, and Siebel [28]. Bompolis et al. [4] reveal, however, that this traditional medium of client relationship management is a one-way approach to relationships with clients as it lacks the capacity for one-on-one and pair-pair relationships. In an effort to foster stronger relationships and to achieve two-way organization-client interactions, the integration of social media into existing organizations' CRM structure, known as social CRM or CRM 2.0, was proposed [9].

Greenberg [29] describes social CRM as a merger between technology and business—an idea that is founded on four key concepts, including technology platform, business rules, services, and social characteristics, which together create a trusted and transparent business environment. The advent of social CRM has created mutual trust between organizations and their clients, which is fundamental to any business's survival. This concept is applied to many forms of business or services, ranging from manufacturing to telecommunication to medicine, among others. Social CRM been widely accepted in various industries, which include logistics enterprise, academia, and telecommunications [12]. However, the adoption of modern client relationship management tools has suffered a setback in the construction industry despite the fact that construction industry stands to benefit more from the tool compared to other industries where the tool is being used successfully.

Swarts et al. [19] affirm the uniqueness of the construction industry and its need for the adoption of CRM 2.0 for its client management. The researchers opined that the construction industry is one where a firm-client relationship commences from the conception of the project compared to other industries where the transaction is largely at the finishing stage. Jiang et al [30] also attest that the construction industry's uniqueness lies in the long duration of the relationship of the construction firm with its clients compared to other industries. Siva et al. [31] reckon that the firm-client interaction in the built environment is one the most emotional transactions a client can experience because of the huge financial demand of the purchasing a dwelling place from a construction firm. It is therefore expedient for the construction firm-client relationship to be preserved.

Though social CRM is a concept that stems from relationship marketing; nevertheless, its founding philosophy, which entails improving long-term profitability by ensuring client retention through more effective client relationships [29], is highly applicable to the construction industry. Harrigan et al. [14] further clarified that the relationship marketing concept is more concerned with stakeholders, while social CRM is focused strictly on the client relationship; as such, social CRM is more concerned with client loyalty [32].

The theory from which social client relationship management is drawn is the theory of equity. The theory of equity provides the basis for which relationship partners, such as clients and organizations, share information and synergies towards achieving sound performance [33]. The theory of equity is majorly concerned with fairness in the relationship between clients and organizations based on their social interactions. Diffley and Mccole [34] affirm that interactions arise from talking and it is through talking that exchange takes place, which includes the exchange of information between the organization and its clients. Thus, the theoretical foundation of social client relationship management has proven that the concept is not limited in application.

However, despite the applicability of this modern tool in any industry, its acceptability in the construction industry is still subject to questioning, and there is a limited research on social CRM as it relates to the construction business [35]. Bresnen and Marshall [36] reveal that the impermeability of the concept into the construction industry thus far can be linked to the nature of the relationships between construction organizations and their clients, which is defined by strict and formal contracts. In a research carried out by [19] using interviews, the study examined the challenges confronting construction professionals in the use of social CRM. The findings revealed that there is a knowledge gap regarding the use of social CRM, as construction businesses and professionals are unsure of what to post on social media platforms to initiate a business conversation. Also, their affinity for the legal-centric approach in relating to their clients, which is characterized by watertight laws and regulations, has been cited as a barrier to adopting the social CRM tool. Likewise, it was revealed that construction organizations' fear of demand for more value from their clients that might have financial implications on the company budget may be discouraging them from adopting social CRM to initiate stronger ties with their clients. In the same vein, construction organizations' lack of commitment to the time and resources necessary to sustain social CRM have also contributed to the wide gap in its adoption. The study finally revealed that the negative perceptions of professionals operating in the construction industry make it difficult for them to engage in social CRM due to fear of defamation and derogatory remarks on the platforms. Preece et al. [1] identify some challenges that can limit the use of social CRM among construction organizations, including lack of support from senior management for the tool due to their limited understanding of the capacity of CRM 2.0, deficiency in the skill of the construction organizations' staff required for the management of the CRM 2.0, and poor usability of the tool. Despite the barriers confronting the social CRM tool in the construction industry, its necessity cannot be overstated due to its potential benefits for client relationship management.

The low level of adoption of CRM in the construction industry could be linked to firms' use of existing practices for sustainable business management rather than discovering new needs, exploring ideas, and taking opportunities for innovation [37,38]. Even though it has been known that innovation in construction organizations is important for their financial success, sustainable

development and competitiveness [39,40] have remained the primary concerns. Similarly, Sidawi [41] argues that construction professionals are known for sticking to the conventional ways in business management. This is a challenge for innovation in construction business circles. Thus, CRM can be regarded as a systemic innovation in the construction industry. Systemic innovations according to Shabanesfahani and Tabrizi [42], refers to innovations that compel a change in the regular practice within a firm's existing products. Systemic innovation refers to the tendency to explore new strategies, markets, and knowledge between organizations and another major actor—the client [43,44]—in order to increase productivity. However, the concept needs acceptance and change from numerous actors for its implementation to be considered a success.

3. Research Methodology

This section outlines the procedure for achieving the objectives of the study. The research methodology is presented below.

3.1. Research Process

The purpose of the study is to assess Nigerian construction organizations' perceptions of the social client relationship management tool (CRM 2.0) in the construction industry. The study consisted of firm-level research examining the level of awareness and use of social client relationship management. Exploratory research design was adopted for the study. This survey design was chosen in order to generate constructs and concepts for the study to be validated by future research [39]. The research design was selected because of its quantitative nature and because little or no research has been conducted relating to the construction industry in Nigeria. While, the review of literature helped identify the constructs used in the research instrument, the pilot study carried out validated the constructs. After the pilot study, few corrections were made before the questionnaire was sent out to the target respondents. The study was conducted in Lagos, Nigeria because of the presence of a considerable number of contracting and consulting firms in the state.

3.2. Sample and Sampling Technique

The target respondents in the construction organizations include but were not limited to the following: the heads of departments, partners, commercial managers, and marketing managers/professionals. Table 1 reveals that 46% of respondents were commercial managers representing contracting firms, while 57% of respondents worked with consulting firms. In an attempt to achieve the objective, data was sourced from the primary source. Primary data was collected with the aid of structured questionnaires administered to both consulting and contracting organizations operating in the built environment. The sample was selected using one of the non-probabilistic techniques—purposive quota sampling technique. This technique allowed a sample to be selected from both types of construction organizations—consulting and contracting firms—with adequate consideration for as equal proportion as practicable given the number of construction organizations within the study area. According to Chen [40], purposive sampling strategy, also known as judgmental sampling technique, elicits data from the respondents best positioned to provide the required information for any study. The study therefore elicited data from target respondents best positioned in an organization to provide relevant information about the subject matter. This was the case because of the non-availability of the list of construction organizations operating in Lagos at the time the research was conducted.

Table 1. Cross-section of the respondents.

Type of Firm	Designation of Respondents					Total
	Head of Department	Commercial Manager	Marketing Personnel	Partners	Others	
Contracting firms	6	21	13	3	3	46
Consulting firms	10	-	2	19	2	33

3.3. Research Instrument

The study examines the use of social client relationship management within the construction sector and the barriers to adoption of CRM 2.0. The research was set out to investigate the social media presence of organizations in the construction industry. The research instrument used for the study was made available to one academic and two commercial managers of multi-national construction firms for content validation prior to administering the questionnaire. The content validation involved the process of ensuring all objectives of the study were covered in the questionnaire.

A total of 125 questionnaires were distributed among consulting and contracting construction organizations operating in the study area. Ultimately, 86 filled research instruments were returned and scrutinized for errors, omissions, completeness, and inconsistencies. Of those, 79 were considered to be adequately completed.

The questionnaire was divided into four sections. Section one examined the demographic variables of the respondents. The second section addressed the level of awareness and use of CRM 2.0 using the following Likert scale of 1–3: 1 = aware and using CRM 2.0, 2 = aware and not using CRM 2.0, and 3 = not aware of CRM 2.0. This 3-point Likert scale was used in a similar study carried out by [45]. The third section examined the presence of the construction organizations on different social media platforms using the following Likert scale range: 1 = do not have account, 2 = have an account and do not use it, 3 = have an account and rarely use it, 4 = have an account and seldom use it, and 5 = have an account and often use it. The fourth section assesses the level of agreement of construction organizations to the challenges confronting their adoption of CRM 2.0 using the following Likert scale range of 1–4: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree. Different Likert scales were used in the study because of the nature of the behavior of the respondents, the volatility of human behavior, the circumstances surrounding each objective, and the intended statistical tool to be used.

To achieve the objective of investigating the social presence of the respondents, fifteen social media platforms were identified from literature: LinkedIn, Facebook, Twitter, WordPress, Instagram, YouTube, social bookmarking sites, Blogger, Snapchat, Google+, Flickr, the company's own website, Vimeo, Yammer, and Pinterest. Similarly, with respect to the second objective of assessing the challenges of the adoption of CRM 2.0, ten challenges were identified from literature: management's negative perception, lack of business strategy, lack of control over social media use, external pressure, organization's size and their lack of investment, management's unwillingness to adopt new technology, and fear of clients' information by social media platform managers.

An inter-item correlation matrix was conducted on all the variables used in the study. The values for all variables were positive. This shows that the variables used for the study possess the same underlying characteristics. The mean inter-item correlation for the study was 0.722, and it is within the range allowable (0.48–0.76) for research [46]. This value suggests a strong relationship among the items used in the research instrument for the study. The reliability of the responses of the social media presence and challenges to adoption of CRM 2.0 was tested using a CRONBACH alpha reliability test. The CRONBACH alpha values of all variables were 0.901, which is greater than 0.7, which is the minimum value of acceptability suggested by [47].

4. Results and Discussion

The results obtained from the analysis form the basis upon which inferences were drawn for the study. The study revealed that commercial managers constituted the highest proportion (38%) of the respondents, indicating their high involvement in social client relationship management in the construction industry. Though it must be noted that both construction professionals with marketing inclinations and partners of consulting firms constituted about 35% of the respondents, as consulting firms deploy employees to maintain contact and manage client relationships over time. Furthermore, 40% of the respondents had working experience of 11 years or more, which implies that they were sufficiently knowledgeable in client relationship management in the construction industry. A sizeable

proportion (80%) of the respondents had formal education to provide relevant information for the study. Table 2 shows the characteristics of the responding firms that participated in the survey. Most of the responding firms (58%) are contracting organizations, while the remaining (42%) are consulting firms. The construction organizations operating in Lagos were of different sizes (small, medium, and large). As depicted in Table 2, 28% of the responding firms were not aware of CRM 2.0, while a sizeable portion (43%) were aware but not using, with the remaining, meagre 29% aware and using CRM 2.0.

Table 2. Percentage distribution of organizational characteristics.

Organizational Characteristics	Frequency	Percentage
Organization type		
Contracting	46	58.2
Consulting	33	41.8
Total	79	100
Number of employees		
1–10	29	36.7
11–50	32	40.5
51–100	12	15.2
Above 100	6	7.6
Total	79	100
Organizations' level of awareness of Client relationship management (CRM) 2.0		
Aware and using CRM 2.0	23	29.1
Aware but not using CRM 2.0	34	43.0
Not aware of CRM 2.0	22	27.8
Total	79	100

This is not surprising as Perrera et al. [48] reckon that the construction industry is often criticized for its slow adoption of information and communication technology (ICT) and innovation, especially when compared to the telecommunication and manufacturing sectors.

4.1. Significant Difference between Contracting and Consulting Firms in their Level of Awareness and Use of the Social Client Relationship Management Concept (CRM 2.0) in the Construction Industry

Considering the different services undertaken by the two types of construction organizations selected for the study, it is expedient to assess their use of the concept. The study postulated the following hypothesis:

Hypothesis (H₁): *There is no significant difference between contracting and consulting firms in the level of awareness and use of CRM 2.0.*

A Mann–Whitney U test was used to analyze the hypothesis, and the result is presented in Table 3. The Mann–Whitney U test is a non-parametric test used to test the differences between two samples from the same population of the same median. In this case, the Mann–Whitney U test was used to test the differences between the contracting and consulting firms in their level of awareness of CRM 2.0. The decision rule states that if the p -value < 0.05 , you reject the null hypothesis and you accept the alternative hypothesis, and vice versa. As depicted in Table 3, with p -value (0.257) > 0.05 at 95% and 99% confidence levels, the study accepts the null hypothesis (there is no significant difference between contracting and consulting firms in the level of awareness and use of CRM 2.0), and thus rejects the alternative hypothesis.

Table 3. Mann–Whitney U test for differences between contracting and consulting firms in their awareness with CRM 2.0.

Test Statistics	Level of Awareness of CRM 2.0
Mann-Whitney U	569.500
Wilcoxon W	1650.500
Z	−1.134
Asymp. Sig. (2-tailed)	0.257

Grouping Variable: organization type.

This implies that both contracting and consulting firms have little to no awareness of CRM 2.0 and are not keen to use the concept of social client relationship management in the construction industry. This could be linked to the affinity of top management to the efficacy of the social media in the management of relationship with clients in the industry. Broughton et al. [49] reckon that the working environment must be right for social media to achieve better results in sustainable business management. The working environment as produced by the top management of organizations is expected to ensure the effective use of social media platforms in client relationship management. Similarly, Myers [50] reiterates that efficient business strategy by top management will ensure the integration of social media into an organization's business objectives. The implementation of the working conditions must be systematic, as well as prompt integration of the use of social media as a business strategy. This is essential for positive outcome in terms of the organization's performance.

4.2. Social Media Presence of Organizations in the Construction Industry

The study identified 15 social media platforms that can be explored by construction organizations to effectively relate with prospective clients and/or clients in general. The social media platforms considered for this research include: Facebook, Instagram, YouTube, the company's own website, LinkedIn, Snapchat, Pinterest, social bookmarking sites, Blogger, Flickr, Yammer, Google+, WordPress, Vimeo, and Twitter, in no particular order. In order to achieve this objective, split mean scores were used to analyze the collected data on the presence of construction organizations on social media platforms. As shown in Table 4, construction organizations are present on some social media platforms, such as their websites, Facebook, LinkedIn, and Google+, but rarely use them for social client relationship management. According to Perrera et al. [47], over 90% of the top 15 construction companies hold and use a Twitter account and LinkedIn account for social client relationship management, whereas 65% have a Facebook account.

Table 4. Presence of construction organizations on social media platforms.

Social Media Platforms	Contracting		Consulting		Overall	
	Mean	Remark	Mean	Remark	Mean	Remark
Company's own website	3.41	Have but rarely use	3.31	Have but rarely use	3.43	Have but rarely use
Facebook	3.00	Have but rarely use	3.62	Have but rarely use	3.28	Have but rarely use
LinkedIn	2.87	Have but rarely use	3.34	Have but rarely use	3.00	Have but rarely use
Google+	2.70	Have but rarely use	2.90	Have but rarely use	2.73	Have but rarely use
WordPress	2.50	Have but rarely use	2.48	Have but do not use	2.48	Have but do not use
Instagram	2.22	Have but do not use	2.07	Have but do not use	2.16	Have but do not use
Twitter	1.93	Have but do not use	1.62	Have but do not use	1.86	Have but do not use
Social bookmarking sites	1.67	Have but do not use	1.55	Have but do not use	1.63	Have but do not use
YouTube	1.57	Have but do not use	1.62	Have but do not use	1.59	Have but do not use
Blogger	1.35	Do not have account	1.24	Do not have account	1.32	Have but do not use
Snapchat	1.28	Do not have account	1.38	Do not have account	1.32	Have but do not use
Pinterest	1.26	Do not have account	1.62	Have but do not use	1.38	Have but do not use
Flickr	1.24	Do not have account	1.24	Do not have account	1.24	Have but do not use
Yammer	1.17	Do not have account	1.21	Do not have account	1.18	Have but do not use
Vimeo	1.13	Do not have account	1.28	Do not have account	1.18	Have but do not use

In a report carried out in Australia by Office of National Statistics [51], it was highlighted that only 20% of construction companies have implemented social media in their businesses. This is in sharp contrast with construction organizations in Nigeria, which have but rarely use it for social client

relationship management. Similarly, Pauley [52] remarks that more than half of construction companies in the United Kingdom have their websites linked with social media accounts in order to monitor their internet traffic—one of many advantages of adopting a social media presence in the construction business. However, some contracting firms have their presence on WordPress as it is probably the easiest and most powerful blogging, gallery, and website content management system (CMS) to help relate with clients and prospective. It is surprising to note that construction organizations are not taking full advantage of using Twitter, Instagram, YouTube, and social bookmarking sites in their interactions with clients. Snapchat, Pinterest, Flickr, Yammer, and Vimeo are not being explored by construction organizations in their business in the construction industry. Whereas, Whiston Solutions [53] reported that the most popular social media platforms used by professionals in the construction industry are LinkedIn, Facebook, Twitter, blogs, Google+, and Pinterest.

4.3. Barriers to the Adoption of CRM 2.0

The study highlighted ten barriers construction organizations face in the adoption of CRM 2.0. Split mean was used to analyze the data collected for this objective, and the results are presented in Table 5. The opinions of the respondents of different firms were presented as follows. It is pertinent to note that small construction organizations are confronted with the problem of organizational size, top management's willingness to adopt new technology, and lack of organizational knowledge of social media client management capacity in the construction industry. In the same vein, the top management's desire to use social media to relate with the client has been called into question as they believe the medium can add little or nothing to organizational performance. Small-sized firms are comfortable with their existing business practices and are not ready to innovate. This confirms the position of [37,38], which argues that the change from existing practices of business management comes with its fair share of difficulty. The top management of construction organizations and construction professionals are thus reluctant to explore social client relationship management. As depicted in Table 4, it can be revealed that medium-sized construction organizations consider the lack of business strategy, complex the nature of client-organization relationship, and top management's willingness to adopt new technology as the challenges that exert the most significance in the adoption of CRM 2.0 in the construction industry. Emerging construction organizations reckon that the client-organization relationship is so complex that exploring social technology will not help the cause. It is imperative that large firms eliminate the fear of lack of control of social media use, the lack of investment in social media software tools, and the lack of knowledge of social client relationship management as the three significant challenges confronting large construction organizations' adoption of CRM 2.0. The majority of large construction organizations are reluctant to control their social media platforms, especially to monitor the information that emanates from their various platforms. Pererra and Brand [47] identify the age of the employees, lack of control, conflict of interest, and lack of encouragement from management as the key barriers to social media use in the construction business. This is similar to the present study that revealed lack of control as one of the significant barriers to adopting CRM 2.0.

Table 5. Challenges confronting small, medium, and large construction organizations in the adoption of CRM 2.0.

Challenges	Small		Medium		Large		Overall	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Construction organization's size.	3.07	1	2.61	3	2.42	8	2.77	3
Management's unwillingness to adopt new technology	3.07	1	2.61	3	2.42	8	2.77	3
Lack of control over social media use	3.00	3	2.55	6	3.00	1	2.81	2
Organization's lack of knowledge of social media client management capacity in the built environment.	2.86	4	2.58	5	2.75	3	2.71	7
Lack of business strategy by organizations	2.83	5	2.87	1	2.67	5	2.82	1
Organization's lack of investment in social software management tools	2.79	6	2.52	7	3.00	1	2.72	6
Complex nature of client-organization relationship	2.76	7	2.74	2	2.75	3	2.76	5
Fear of client information leakages by social media platforms managers	2.69	8	2.23	10	2.42	8	2.41	10
Management's negative perception about social media platforms	2.59	9	2.48	8	2.50	6	2.54	8
External pressure from competitors	2.52	10	2.42	9	2.50	6	2.49	9

The study also postulated a hypothesis to further examine the significant differences among small, medium, and large construction organizations in the challenges confronting the adoption of CRM 2.0.

H₀: *There is no significant difference among small, medium, and large construction organizations in the challenges confronting the adoption of CRM 2.0.*

The study used a Kruskal Wallis test to test the differences among small, medium, and large construction organizations in the challenges confronting the adoption of CRM 2.0 in the construction industry. The Kruskal Wallis test is a non-parametric test used for comparing two or more independent samples of equal or different sample sizes. The test is alternative to the one-way analysis of variance (ANOVA). The decision rule states that if the p -value < 0.05 , you reject the null hypothesis and you accept the alternative hypothesis, and vice versa. As shown in Table 6, with p -value (0.38) > 0.05 at 95% and 99% confidence levels, the study accepts the null hypothesis (there is no significant difference among small, medium, and large construction organizations in the challenges confronting the adoption of CRM 2.0), and thus rejects the alternative hypothesis. This implies that the challenges confronting small, medium, and large construction firms when adopting CRM 2.0 as a business strategy are the same.

Table 6. Kruskal Wallis test for challenges confronting small, medium, and large firm in adopting CRM 2.0.

Test Statistics	Challenges in the Adoption of CRM 2.0
Chi-square	3.075
Df	3
Asymp. Sig	0.380

Grouping variable: organization size.

5. Conclusions

This paper reported on a study examining social client relationship management in the construction industry. It was able to draw upon both empirical and methodological conclusions on the social media presence of construction organizations and the challenges to the adoption of social client relationship management by those construction organizations. CRM 2.0's adoption in the construction industry can be a source of competitiveness and sustainability for small and medium enterprises (SME). Client sustainability for a construction firm denotes the organization's survival in the industry, which can be achieved by the implementations of certain actions, such as the adoption of CRM as one of its business strategy. Sustainable business strategies, according to [54], helps organizations to be competitive and enhances the achievement of long-term goals. It has become imperative that sustainability in business improves consistency and reduces uncertainty,

thereby ensuring stability in organizations. However, the adoption of the social client relationship management involves some challenges experienced by organizations in terms of information flow and complexity of the client relationship.

Even though the benefits and challenges of adopting social client relationship management in the construction industry were highlighted in the study, the contributions to the academic field and the managerial strategies of the practitioners are still not fully developed. This research however contributes to our growing knowledge on this topic in the following ways:

- The study provided valuable insight into the level of awareness and use of social client relationship management in the Nigerian construction industry. There have been few applications of the concept in the Nigerian construction industry to date.
- By exploring the social media presence of construction organizations, this study provided a platform for highlighting the relevance of innovation in ensuring and maintaining sustainable business management in the construction industry in order for firms to operate at their maximum potential.
- The study will form the foundation for future work on examining holistic factors inhibiting the adoption of social client relationship management by construction organizations in Nigeria.

Furthermore, the following implications in the construction industry have become noticeable:

1. Construction organizations should embrace innovation, making a shift from existing practices in business management into social media marketing to increase their client base.
2. Social media should be explored as a means of maintaining a meaningful relationship with clients and prospective clients, which will improve organization performance.
3. The study revealed significant challenges to the adoption of CRM 2.0, which are important for existing and prospective organizations to take into consideration when adopting social client relationship management into their business strategy.

The findings suggest that construction organizations are still hesitant to implement social media in a business environment and fully adopt CRM 2.0 in the construction industry, because it is perceived as a risk to their business, and more often than not its potential benefits are overlooked. Even if the concept is implemented in a construction business, lack of control and lack of effective communication of protocols to employees are potential threat to business. Furthermore, integrating social media to achieve business vision and missions in the long term is crucial for a successful social business strategy.

The main limitation of the study is the number of responses. It can also be said that the failure to get more objective top management responses, as compared to the cadre of respondents involved in the study, is another limitation. It was observed that very few responses were obtained from respondents from top management tier. Another limitation of the study is that it was carried out in only one city, which will affect the ability to apply the result to the entire country. Methodologically, future research could be conducted on the blending of quantitative and qualitative data.

Author Contributions: The experience and knowledge of each author contributed to the development and final version of the article. R.O. conceived the article, R.O., O.O., A.A. and L.A. performed the data collection and wrote the article with equal responsibility, while O.O. analyzed the data.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Preece, C.; Chong, H.Y.; Golizadeh, H.; Rogers, J. A review of customer relationship (CRM) implications: Benefits and challenges in construction organizations. *Int. J. Civ. Eng.* **2014**, *13*, 362–371.
2. Preece, C.N.; Shafiei, M. Development of client care initiatives in construction contracting organizations. In Proceedings of the 14th Annual ARCOM Conference, Reading, UK, 9–11 September 1998; Hughes, W., Ed.; University of Reading, Association of Researchers in Construction Management: Reading, UK, 1998; Volume 2, pp. 586–596.

3. PIDAS. Customer Care as Critical Factor for Increasing the Customer Value and Ensuring Operational Success in the Social Customer Economy. Available online: https://www.pidas.com/sites/default/files/White_Paper_Customer_Care_Concept_2_0_final_Engl_2.0.pdf (accessed on 14 November 2017).
4. Bompolis, C.G.; Boutsouki, C. Customer relationship management in the era of social web and social customer: An investigation of customer engagement in the Greek retail banking sector. *Procedia Soc. Behav. Sci.* **2014**, *148*, 67–78. [[CrossRef](#)]
5. Parvatiyar, A.; Sheth, J.N. Customer Relationship Management: Emerging Practice, Process, and Discipline. *J. Econ. Soc. Res.* **2011**, *3*, 1–34.
6. Pererra, S.; Victora, M.F.; Brand, S. Use of social media in construction industry: A case study. In Proceedings of the International Council for Building Joint Symposium 2015 (CIB2015): ‘Going North for Sustainability’: Leveraging Knowledge and Innovation for Sustainable and Development, London, UK, 23–25 November 2015; pp. 462–473. Available online: http://www.irbnet.de/daten/iconda/CIB_DC28892.pdf (accessed on 14 November 2017).
7. Kaplan, A.M.; Haenlein, M. Users of the world, unite! The challenges and opportunities of Social Media. *Bus. Horiz.* **2010**, *53*, 59–68. [[CrossRef](#)]
8. Mathouse, C.D.; Haenlein, M.; Skiera, B.; Wege, E.; Zhang, M. Managing customer relationships in the social media era: Introducing the social CRM house. *J. Interact. Mark.* **2013**, *27*, 270–280. [[CrossRef](#)]
9. Faase, R.; Helms, R.; Spruit, M. Web 2.0 in CRM domain: Defining Social CRM. *Int. J. Electron. Cust. Relat. Manag.* **2011**, *5*, 1–22. [[CrossRef](#)]
10. Masterman, J.W.E. *Introduction to Procurement System*, 2nd ed.; Taylor and Francis: London, UK, 2005.
11. Li, W.; Wu, M.Y.; Du, J.G. Pattern Analysis of the CRM application in the china’s telecommunication industry. *Adv. Intell. Soft Comput.* **2012**, *115*, 649–655.
12. Li, Y.; Xiao, Z.; Liu, F.S. Classification of clients in Client Relationship Management (CRM) base on rough set theory. *Int. Conf. Mach. Learn. Cybern.* **2003**, *1*, 242–246.
13. Smyth, H.; Fitch, T. Application of relationship marketing and management: A large contractor case study. *Constr. Manag. Econ.* **2009**, *27*, 399–410. [[CrossRef](#)]
14. Harrigan, P.; Ramsey, E.; Ibbotson, P. Critical factors underpinning the e-CRM activities of SMEs. *J. Mark. Manag.* **2011**, *27*, 503–529. [[CrossRef](#)]
15. Chen, J.; Ching, R.K.H. The effects of information and communication technology on customer relationship management and customer lock-in. *Int. J. Electron. Bus.* **2007**, *5*, 478–498. [[CrossRef](#)]
16. Warfield, B. A Social CRM Manifesto: How to Succeed with the CRM Virtuous Cycle. 2009. Available online: www.slideshare.net/Helpstream/a-social-crmmanifesto-how-to-succeed-with-the-social-crm-virtuouscycle/ (accessed on 14 November 2017).
17. Payne, A.; Pennie, F. A Strategic Framework for Customer Relationship Management. *J. Mark.* **2005**, *69*, 167–176. [[CrossRef](#)]
18. Liu, T.; Mbachu, J.; Mathran, A.; Jones, B.; McDonald, B. The Perceived Benefits of Apps by Construction Professionals in New Zealand. *Buildings* **2017**, *7*, 111. [[CrossRef](#)]
19. Swarts, K.M.; Lehman, K.; Lewis, G.K. The use of social customer relationship management by building contractors: Evidence from Tasmania. *Constr. Manag. Econ.* **2016**, *34*, 302–316. [[CrossRef](#)]
20. Aheame, M.; Rapp, A.; Marriados, B.J.; Ganesan, S. Challenges of CRM Implementation in Business-to-Business Markets: A Contingency Perspective. *J. Pers. Sell. Sales Manag.* **2012**, *32*, 117–129.
21. Khoury, H.; Maayea, E. The Time Is Now. A Middle East point of view. *Summer*. 2015. Available online: <https://www2.deloitte.com/content/dam/Deloitte/xs/Documents/About-Deloitte/mepovdocuments/mepov17/the-time-is-now-mepov17.pdf>. (accessed on 15 December 2017).
22. Afolabi, A.; Fagbenle, O.; Mosaku, T. IT management of building material’s planning and control processes using web-based technologies. *Adv. Intell. Syst. Comput.* **2017**, 12–19. [[CrossRef](#)]
23. Ibem, E.O.; Laryea, S. E-procurement use in the South African construction industry. *J. Inf. Technol. Constr.* **2015**, *20*, 364–384.
24. Kumar, V.K.S.; Devi, R.V. Social media in financial services: A theoretical perspective. *Procedia Econ. Financ.* **2014**, *11*, 306–313. [[CrossRef](#)]
25. Adegbuyi, O.A.; Akinyele, F.A.; Akinyele, S.T. Effect of social media marketing on small scale business performance in Ota-Metropolis, Nigeria. *Int. J. Soc. Sci. Manag.* **2015**, *2*, 275–283. [[CrossRef](#)]

26. Begorgis, O.B.G. The Impact of Social Media as a Customer Relationship Management Tool. Master's Thesis, Karlstad Business School, Karlstad University, Karlstad, Sweden, 2015.
27. Moules, J. Financialtimes.com. Available online: <http://www.ft.com/cms/s/0/63687ba4-3858-11e1-9f07-00144feabdc0.html#axzz1jdKLbbk6> (accessed on 14 November 2017).
28. Choudhury, M.M.; Harrigan, P. CRM to social CRM: The integration of new technologies into customer relationship management. *J. Strateg. Manag.* **2014**, *22*, 149–176. [[CrossRef](#)]
29. Greenberg, P. *CRM at the Speed of Light: Social CRM Strategies, Tools, and Techniques for Engaging Your Customers*, 4th ed.; McGraw Hill: New York, NY, USA, 2010.
30. Jiang, Z.; Henneberg, S.C.; Naude, P. Supplier relationship management in the construction industry: The effects of trust and dependence. *J. Bus. Ind. Mark.* **2002**, *27*, 3–15. [[CrossRef](#)]
31. Siva, J.P.S.; London, K. Investigating the role of client learning for successful architect-client relationships on private single dwelling projects. *Arch. Eng. Des, Manag.* **2011**, *7*, 177–189. [[CrossRef](#)]
32. Lovelock, C.; Wirtz, J. *Services Marketing*; Pearson: Hoboken, NJ, USA, 2011.
33. Guerrero, S.; Andersen, H.; Afifi, A. *Close Encounters: Communication in Relationships*, 2nd ed.; Sage Publications, Inc.: Los Angeles, CA, USA, 2007.
34. Diffley, S.; Mccole, P. Extending customer relationship management into a social context. *Serv. Ind. J.* **2015**, *35*, 591–610. [[CrossRef](#)]
35. Lin, S.; Ke, X. CRM practice in an emerging market: The case of china mobile. *Afr. J. Bus. Manag.* **2011**, *16*, 6957–6963.
36. Bresnen, M.; Marshall, N. Building partnerships: Case studies of client contractor collaboration in the UK construction industry. *Constr. Manag. Econ.* **2000**, *18*, 819–832. [[CrossRef](#)]
37. Wu, K.J.; Lia, C.J.; Tsing, M.L.; Chon, P.J. Understanding innovation for sustainable business management capabilities and competencies under uncertainty. *Sustainability* **2015**, *7*, 13726–13760. [[CrossRef](#)]
38. Van de Ven, A.; Engleman, R. Central problem in managing corporate innovation and entrepreneurship. In *Advances in Entrepreneurship, Firm Emergence and Growth 7*; Emerald Group Publishing: West Yorkshire, UK, 2007; pp. 47–72.
39. Choy, M.; Park, G. Sustaining innovative success: A case study on consumer-centric innovation in the ICT industry. *Sustainability* **2016**, *8*, 986. [[CrossRef](#)]
40. Chen, S.H. The influencing factors of enterprise sustainable innovation: An empirical study. *Sustainability* **2016**, *8*, 425. [[CrossRef](#)]
41. Sidawi, B. The impact of social interaction and communications on innovation in the Architectural design studio. *Buildings* **2012**, *2*, 203–217. [[CrossRef](#)]
42. Shabanesfahani, A.; Tabrizi, M.R.F. Barriers of Systemic Innovation to Increase Productivity of Engineering and Construction Industries of the World. *IOSR J. Mech. Civ. Eng.* **2012**, *4*, 43–50. [[CrossRef](#)]
43. Larson, L.; Larsson, J. Sustainable Development in Project-Based Industries—Supporting the Realization of Explorative Innovation. *Sustainability* **2018**, *10*, 683. [[CrossRef](#)]
44. Zikmund, W.G.; Babin, B.J.; Carr, J.C.; Griffin, M. *Business Research Methods*; Cengage Learning: Belmont, CA, USA, 2013.
45. Shaikh, A.A.; Raju, R.; Malim, N.L.; Jayaraj, G.K. Global status of Building Information Modelling (BIM)—A review. *Int. J. Recent Innov. Trends Comput. Commun.* **2016**, *4*, 300–303.
46. Kumar, R. *Research Methodology: A Step-by-Step Guide for Beginners*, 3rd ed.; Sage Publication: Los Angeles, CA, USA, 2011.
47. Pallant, J. *SPSS Survival Manual*, 4th ed.; McGraw-Hill: New-York, NY, USA, 2010.
48. Pererra, S.; Brand, S. The Use of Social Media in the Construction Industry. Available online: https://www.researchgate.net/publication/299394644_Use_of_social_media_in_construction_industry_A_case_study (accessed on 14 November 2017).
49. Broughton, A.; Higgins, T.; Hicks, B.; Cox, A. *Workplaces and Social Networking: The Implications for Employment Relations*; The Institute for Employment Studies: Brighton, UK, 2010.
50. Myers, A. 13 Types of Social Media Platforms and Counting. 2012. Available online: <http://decidedlysocial.com/13-types-of-social-media-platforms-and-counting/> (accessed on 14 November 2017).
51. Office of National Statistics. Business Use of Social Media. 2013. Available online: <http://www.ons.gov.uk/rels/rdit2/ict-activity-of-uk-business/2012/sty-ecom-2012.html> (accessed on 14 November 2017).

52. Pauley, N. How the top UK Construction Companies Are using Social Media Marketing in 2014. Available online: <http://www.pauleycreative.co.uk/2014/01/how-thetop-construction-companies-are-using-social-media-in-2014/> (accessed on 14 November 2017).
53. Whiston Solutions, Social Media Benefits for the Property and Construction Industry. 2015. Available online: <http://www.whiston-solutions.com/industrydevelopments/social-media-benefits-property-and-construction-industry> (accessed on 14 November 2017).
54. Giannoni, C.; Alarcon, L.F.; Vera, S. Diagnosis of Sustainable Business Strategies Implemented by Chilean Construction Companies. *Sustainability* **2018**, *10*, 82. [[CrossRef](#)]



© 2018 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).